

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An ultrasonic nebulizer for producing high-volume sub-micron droplets, comprising:

an ac/dc converter for rectifying an ac current to a dc current and providing a dc voltage;
an oscillator circuit powered by said dc voltage for producing an oscillation signal with a frequency larger than or equal to 3MHz;

an amplifying device being connected to said oscillator circuit for amplifying the oscillation signal, wherein the amplifying device includes an NPN transistor having an emitter connecting a positive terminal of a diode and one terminal of a first inductor that has the other terminal connecting a negative terminal of a first capacitor and one terminal of a second inductor, a collector connecting a negative terminal of the diode, a positive terminal of the first capacitor, a positive terminal of the third capacitor and a positive terminal of a second capacitor that has a negative terminal connecting the other terminal of the second inductor, and a base connecting the oscillation signal through a resistor and a negative terminal of the third capacitor;

a nebulization chamber having a lower face for holding a liquid to be nebulized; and
at least one piezoelectric ceramic oscillator formed on the lower face of said nebulization chamber and being electrically connected to the amplified signal to provide an ultrasonic output to cause nebulization for producing high-volume sub-micron droplets.

2. (Original) The ultrasonic nebulizer for producing high-volume sub-micron droplets as claimed in claim 1, wherein, the ac/dc converter comprises a register and four diodes forming a Whetstone bridge for rectifying the ac current.

Serial Number 10/617,796

3. (Original) The ultrasonic nebulizer for producing high-volume sub-micron droplets as claimed in claim 1, wherein, the oscillator circuit comprises a plurality of resistors, a plurality of capacitors, a variable resistor and an oscillator for producing the oscillation signal.

4. (Original) The ultrasonic nebulizer for producing high-volume sub-micron droplets as claimed in claim 1, wherein, the amplifying device comprises a resistor, a plurality of capacitors, a plurality of inductances, a diode, and a power amplified transistor for amplifying the oscillation signal.

5. (Original) The ultrasonic nebulizer for producing high-volume sub-micron droplets as claimed in claim 1, wherein, the frequency of the oscillation signal is equal to or large than 3MHz.